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Cancer Registry Review

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Janet Napolitano, Governor

Susan Gerard, Director

ADHS WELCOMES NEW DIRECTOR

Susan Gerard was appointed Director of the Arizona Department of Health Services on April 29, 2005. As state Health Director, she oversees one of the largest departments in Arizona State Government, with a budget of more than $1 billion and a workforce of more than 1,800 employees. The Arizona Department of Health Services is the state's lead public health agency, responsible for protecting, maintaining and improving the health of all Arizonans. The department operates programs in behavioral health, disease prevention and control, health promotion, community public health, environmental health, maternal and child health, emergency preparedness, and regulation of child care and assisted living centers, nursing homes, hospitals, and other health care providers.

Ms. Gerard previously served as a member of Governor Janet Napolitano' s administration as a policy adviser for health care issues, assisting with crucial decisions involving state and federal budgets of nearly $8.1 billion directly linked to services for more than 1.2 million residents.

Ms. Gerard has given years of her time to the benefit of Arizona. Ms. Gerard served in the state Legislature from 1988 to 2002, chairing the health committee for 10 years and earning recognition as a statewide leader on health care issues. She received awards for her leadership, and honors from all the major health organizations in Arizona, including the Arizona Hospital Association, Arizona Medical Association and the Arizona Public Health Association.

(Continued on next page)

In This Issue of *Cancer Registry Review*:

(ADHS Director, continued from previous page)
During her legislative career, Ms. Gerard directed the effort to create the Child Fatality Review Program to reduce preventable child deaths using a cross-disciplinary approach. She also led a yearlong study and implemented one of the country's first advance health care directive programs. She led efforts to fund and create intervention and prevention programs such as Healthy Families, Healthy Start and Head Start. And she was instrumental in obtaining funding for the seriously mentally ill, the Arizona State Hospital and other mental health programs.

"She brings years of experience and understanding of complex health care issues--including disease prevention, Medicaid and Medicare, public health and behavioral health," Governor Napolitano said in announcing Ms. Gerard's appointment. "I believe she can lead DHS in the right direction."

Ms. Gerard has been a resident of Arizona for 32 years. She has been active in her community, having served on a variety of boards and service organizations, including:

- City of Phoenix AIDS Task Force, Chair
- National Campaign to Prevent Teen Pregnancy
- National Forum for State Health Policy Leadership
- Institute for Mental Health Research
- Supreme Court Juvenile Justice Committee
- Madison Education Foundation
- Long Term Care Task Force

Ms. Gerard received a Bachelor of Arts from Drake University in Des Moines, Iowa, and a Masters in Business Administration from Arizona State University.

ACR ANNOUNCEMENTS

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ACR ANNOUNCEMENTS

ACR Observed Holidays

The ACR office observes the following holidays:

Columbus Day	**10/10/05**	**Veteran's Day**	**11/11/05**
Thanksgiving	**11/24/05**	**Christmas**	**12/26/05**

Please do not fax confidential information on these days.

The ACR Needs Your Input!

WEB-BASED TRAINING

The ACR is in the early stages of developing some web-based training for registrars.

Would this be a useful tool for you?

What kind of web-based training topics would you like to have available?

ROCKY MOUNTAIN SCREENS

The ACR is also starting to consider re-ordering the data items as they appear in Rocky Mountain. A blast email was sent out to the registrar community last winter that asked people for their ideas, and we got some great responses. We'd like at this time to pick up the project and ask for additional input. What would you like to see? Are there fields that don't "make sense" where they are?

We will probably not be able to please everyone 100%, but we will take note of those issues and ideas that are shared by many people, and try to arrange the screens in a manner that is more intuitive. When providing feedback, please be as specific as possible. Use the complete data item name as it appears in RMCDS. Feel free to send print screens via email attachment or fax to illustrate your ideas.

Please forward your ideas on the above topics to Kara Locketti, Training Manager, at (602) 542-7592 (Phone) or locketk@azdhs.gov.

Your input is appreciated and important!

REGISTRAR EDUCATION

CRAAZ Fall Meeting

The Cancer Registry Association of Arizona will hold its Fall workshop on October 7 at Heritage Highlands Country Club in Tucson. This year's meeting will focus on issues surrounding coding and staging for head & neck primaries and lymphomas.

More detailed information on the workshop, along with a registration form, was emailed to facilities from the ACR in late August. Any questions should be directed to Brian at 480-461-2204 or brian.cappellini@bannerhealth.com

NCRA Online Education Center

NCRA recently initiated a web site that allows for "one-stop shopping" for registrar educational opportunities. New registrars can purchase practice certification exams that give immediate feedback. Experienced registrars can earn CE hours through case scenarios and an online version of the quarterly JRM quiz. Exam prep is available for $100. The case scenarios can be purchased for $25 for NCRA members and $35 for non-members.

You can access the Online Education Center by either going to NCRA's web site, http://www.ncra-usa.org and clicking on the link "See Our Education Center" on the left side of the main page. You must create an account in order to access the Center's products.

New Collaborative Staging Exercises Available

SEER is in the process of updating their site-specific staging exercises to include the most recent updates to the Collaborative Staging system. Updates are complete and the exercises are available for the following sites: Breast, prostate, lung, colorectal, bladder, head and neck, upper GI, lymphoma & leukemia, and melanoma. Exercises for the remaining sites in the module (Cervix & uterus, ovary, testicular, kidney and ureter, pancreatic & biliary, and brain) are being revised and, at press time, are not available. These exercises consist of a brief case summary containing the necessary information for coding, along with questions on summary, AJCC, and collaborative stage. You receive immediate feedback on whether or not the answer you submitted was correct. A rationale for the correct reply is also given.

You can access these units at http://training.seer.cancer.gov.

CODING CORNER

ARIZONA CANCER REGISTRY
QUESTIONS REGARDING CLASS OF CASE
Taken from the ACOS COC I&R

14909 4/22/2005	If prostate cancer was diagnosed at a staff physician's office, tx done at our facility, is it class 1 or 2? If diagnosed at a staff physician's office, tx done elsewhere, is it class 7?	If your facility was involved in the first course of treatment, the physician office is considered to be an extension of the facility and the class of case is 1. If the patient was diagnosed in the staff physician office and received treatment elsewhere, this case is not reportable for your facility. Class of case 7 is used when the pathology department at the facility reads and generates a pathology report on tissue submitted from an outside source and has no contact with the patient.
14106 2/3/2005	If a patient was diagnosed at our facility and treatment is given at a staff physician's office, is it class 0 or a 1? If a patient was diagnosed at our facility and during admission it was decided certain treatment should be given, is that a class 0 or 1?	Because your facility was involved in the diagnosis and work up of this case and the treatment was performed in a staff physician's office, this is a Class of Case 1 for your facility. If patient was diagnosed at your facility and the first course of treatment was planned at your facility, this would still be a class of case 1.
13569 12/2/2004	If a staff physician clinically diagnoses a patient in their office and they come to our facility for an incisional biopsy for histologic confirmation, what is the class of case?	Class 0, unless you also treated the patient in which case it would be class 1.
12723 9/2/2004	A patient was biopsied at a staff physician's office, had the pathology read at an outside laboratory and had radiation treatment at another staff office. Is it a class of case 1 for our facility? What is the class of case for the two offices?	This case is not reportable because they were never seen at your facility.
12505 8/13/2004	Is a staff physician's office part of our facility or is it considered diagnosed elsewhere?	Staff physician's offices are considered an extension of your facility. When considering class of case, if a patient was diagnosed at a staff physician's office and received first course of treatment at your facility, they would be considered a class of case 1. The date of first contact and the accession number would reflect when the patient was first seen at your facility.
11733 5/25/2004	If a patient was diagnosed in a staff physician's office, the pathology read at a different hospital and the patient came to our facility for part of their first course of therapy, what is the class of case?	This would be considered a class 1 as the staff physician's office is an extension of the facility and the patient received first course of treatment at your facility.
9118 8/26/2003	If a patient was diagnosed at a staff physician's office and a year later came to our facility for palliative care, what is the class of case?	**(ACR's Response)** Submit an ACR Tracking Form with the case info. It would be reportable to the ACR if it has not been previously reported.

CODING CORNER

Class of Case Quick Guide

Place of Dx	Place 1st Course Rx	Class of Case	Analytic or Non-analytic	Reportable to ACR
Your facility	Staff physician office	1	Analytic	Yes
Your facility	Decision not to treat made at your facility	1	Analytic	Yes
Your facility	Another facility (All treatment)	0	Analytic	Yes
Your facility	Decision not to treat made at another facility	0	Analytic	Yes
Your facility	Your facility and another facility	1	Analytic	Yes
Your facility	Treatment plan only at your facility; all treatment administered at another facility	0 (FORDS 2004) 0 (FORDS 2003) 1 (ROADS)	Analytic	Yes
Your facility	Your facility (All or part of treatment)	1	Analytic	Yes
Your facility	Unknown if treatment recommended or administered	1; Try to determine where treatment was given. Do not use as default code, as this may skew class of case distribution	Analytic	Yes
Your facility	Treatment recommendation made at your facility, unknown if administered	1	Analytic	Yes
Staff physician office	Same staff physician office (All treatment)	6	Non-analytic	No
Staff physician office	Decision not to treatment made at same staff physician office	6	Non-analytic	No
Staff physician office	Your facility	1	Analytic	Yes
Staff physician office	Another staff physician	N/A	N/A	No
Staff physician office	Another facility	N/A	N/A	No
Staff physician office	Another facility and your facility	1	Analytic	Yes

Continued on next page

CODING CORNER

Class of Case Quick Guide

Place of Dx	Place 1st Course Rx	Class of Case	Analytic or Non-analytic	Reportable to ACR
Staff physician office	Staff physician office and another facility	N/A	N/A	No
Staff physician office	Staff physician office, another facility, and your facility	1	Analytic	Yes
Another facility	Your facility (All or part)	2	Analytic	Yes
Another facility	Staff physician's office	N/A	N/A	No
Another facility	Treatment plan only at your facility; all treatment administered at another facility	3 (FORDS 2004) 2 (FORDS 2003) 2 (ROADS)	Analytic (ROADS and FORDS 2003) Non-analytic (FORDS 2004)	Yes, if not previously reported (FORDS 2004) Yes (ROADS and FORDS 2003)
Another facility	N/A; consult obtained that changes previous diagnosis via a definitive test	3	Non-analytic	Yes
Another facility	N/A; first-time histologic confirmation of clinically suspected malignancy	3	Non-analytic	Yes
Another facility	No info on first course of treatment	3	Non-analytic	Yes, if not previously reported
Another facility	Another facility; your facility provided 2nd opinion	3	Non-analytic	Yes, if not previously reported
Another facility, or physician's office (staff or non-staff)	Another facility or office; diagnosed or treated at your facility for recurrence or progression	3	Non-analytic	Yes, if not previously reported
Another facility	Another facility; subsequent treatment given at your facility due to discontinuation of first course	3	Non-analytic	Yes, if not previously reported
Another facility	Your facility has pathology report only. Patient does not enter facility for diagnosis or treatment	7	Non-analytic	No; If your facility wishes to abstract these cases, please contact the ACR
Non-staff Physician office	Your facility	2	Analytic	Yes

Continued on next page

CODING CORNER

Class of Case Quick Guide

Place of Dx	Place 1st Course Rx	Class of Case	Analytic or Non-analytic	Reportable to ACR
Another facility or physician's office (staff or non-staff)	Another facility; patient seen at your facility for diagnostic workup or with active disease	3	Non-analytic	Yes, if not previously reported
Your facility prior to registry reference date	Your facility or another facility prior to reference date; Your facility manages or treats recurrence or progression after reference date	4	Non-analytic	Yes, if not previously reported
Diagnosed at autopsy	N/A	5	Non-analytic	Yes, if not previously reported
Diagnosis established by death certificate	N/A	8	Non-analytic	N/A; Central registry classification only
Unknown if previously diagnosed and unknown if previously treated	N/A	9	Non-analytic	N/A; Central registry classification only

CODING CORNER

Coding Multiple Non-Malignant Brain Histologies

Note: Table 3 in the "Brain Book" dated 9/4/2003 is not valid. It should be crossed off in your edition. The following information will be distributed in the future in the updated version. The table was revised because there were a couple of malignant histologies accidentally included in the original table and one code was missing. Table 3 serves to identify which histologies are essentially the same and which ones are different. So if you look at the table, you know that a neurothekoma and a neuroma are from different 'families', but a gliosarcoma 9442 and a ganglioglioma 9505/1 are in the same 'family.'

All of the information on this page with the exception of Table 3 is in the current version of The Brain Book.

For **non-malignant CNS tumors**, **a difference at the fourth character level** (subsite), histology, and laterality must be considered.

For multiple lesions in which all are non-malignant tumors:

If different sites, then separate primaries

***Example*:** A benign tumor in the parietal lobe (C71.3) and a separate benign tumor in the frontal lobe (C71.1). *Count and abstract as separate primaries*.

***Example*:** Meningioma of cervical spine dura (C70.1) and separate meningioma overlying occipital lobe (C70.0, cerebral meninges). *Count and abstract as separate primaries.*

***Exception*:** If one of the subsites is non-specific (such as brain, NOS C71.9) and the other is specific in the same 3 character category (such as C71._), count as one primary only. For example, biopsy of the temporal lobe (C71.2) shows benign tumor and diagnosis from CT scan states neoplasm of brain (C71.9). Report one primary only (C71.2)

If different histologies, then separate primaries. To determine whether the tumors have different histologies, code the histology of each of the tumors and look them up in Table 3.

a.If neither histology code is in Table 3, count and abstract as one primary **if codes are the same at the three digit level**.

***Example*:** Patient has a clear cell meningioma (9538/1) of the cerebral meninges and a separate transitional meningioma (9537/0) in another part of the same hemisphere. *Count and abstract as one primary.*

b. If the two histology codes are in the same category, count as one primary.

***Example*:** Patient has a ganglioglioma (9505/1) of the cerebellum (C71.6) and a neurocytoma (9506/1) of the cerebellopontine angle (C71.6). *Count and abstract as one primary.*

c. If the histology codes are in different categories, count and abstract as separate primaries.

***Example*:** Patient has a choroid plexus papilloma (9390/0) of the third ventricle (C71.5) and a chordoid glioma (9444/1) of the third ventricle (C71.5). *Count and abstract as separate primaries.*

d. If one of the histologies is in Table 3 and the other is not, compare codes at the three-digit level. If they are the same, count as one primary. If different, count as two primaries.

***Example*:** Patient has a choroid plexus papilloma (9390/0) diagnosed by stereotactic needle biopsy in August and at resection in September the diagnosis is atypical choroid plexus papilloma (9390/1). *Count and abstract as one primary.*

Example: Patient has a neuroepithelioma (9503/0) diagnosed in March and a dysembryoplastic neuroepithelial tumor (9413/1) of the occipital lobe diagnosed in July. *Count and abstract as separate primaries.*

If same site and same histology:

a. and **laterality** is same side, one side unknown or not applicable (see exception under A.1 above), then one primary

b. and **laterality** is both sides, then separate primaries

Note: Refer to Laterality coding guidelines, above

***Example*:** Separate temporal lobe (C71.2) benign tumors on right and left sides. *Count and abstract as separate primaries.*

Table 3. Histologic Groupings to Determine Same Histology for NON-MALIGNANT Brain Tumors (*Table revised 04-03-2004)*

Choroid plexus neoplasms	9390/0, 9390/1
Ependymomas	9383, 9394, 9444
Neuronal and neuronal-glial neoplasms	9384, 9412, 9413, 9442, 9505/1, 9506
Neurofibromas	9540/0, 9540/1, 9541, 9550, 9560/0
Neurinomatosis	9560/1
Neurothekeoma	9562
Neuroma	9570
Perineurioma, NOS	9571/0

Note: If two histologies are in the same group in Table 3 and counted as a single primary, use the code for the first diagnosis or the more specific histology.

CODING CORNER

REPLACEMENT FOR SEER BOOK 8

SEER*Rx, released on July 1st, is a computer program that allows look-up of antineoplastic drugs and combination regimens (for example, CHOP, CAF, etc.). SEER*Rx can be used **in place of SEER Book 8, Antineoplastic Drugs**, and its supplements **for cases diagnosed 1/1/05 and after. Review and re-coding of cases diagnosed in prior years is not required or recommended.**

You can access SEER*Rx web site using the URL http://seer.cancer.gov/tools/seerrx/.

You must request a password using the online form in order to download the SEER*Rx program.

ACR Requirement- Use of SEER*Rx is effective for cases diagnosed on 1/1/05 and after.

CHANGE IN SEER ANTINEOPLASTIC CATEGORIES

Some monoclonal antibodies that were originally categorized and coded as immunotherapy are now considered chemotherapy per SEER*Rx.

According to April Fritz of SEER, these changes are based on what has been learned in the past decade about these agents' mechanisms of action.

Herceptin (trastuzumab) and Rituxan (Rituximab) are two of the more common agents now coded as chemotherapy.

ACR Requirement- Do **NOT** recode cases diagnosed prior to 1/1/05. Use Book 8 for cases prior to January 1st of this year, and SEER*Rx for cases diagnosed 1/1/05 and after.

MORE SEER*RX

Diagnosis Dates vs. Treatment Dates

Coding treatment using SEER*Rx is applicable for cases diagnosed on 1/1/05 and after. This refers only to the date of the initial diagnosis, not the treatment date.

Do not use SEER*Rx for cases diagnosed prior to 2005 but treated in 2005 or beyond. For example, if your facility collects information on subsequent courses of therapy, use SEER Book 8 if the case was diagnosed before 1/1/05, even if the therapy was given on or after 1/1/05.

Coding Decadron Using SEER*Rx

When deciding how, or whether, to include Decadron as part of first course of treatment regimens for lymphoma, leukemia, or multiple myeloma cases diagnosed in 2005 forward, it is important to try to glean information from the record about why the drug was given. If it was administered to reduce edema/swelling, do not code it as therapy because the intent was not to modify, control, remove, or destroy proliferating cancer cells (definition of treatment provided in FORDS: Revised for 2004, page 28, paragraph under "Treatment Plan" heading).

For cases diagnosed prior to 2005, code Decadron as "Hormone" for lymphoma, leukemia, and myeloma primaries.

SEER*Rx vs. "Abstracting and Coding Guide for Hematopoietic Diseases"

For cases diagnosed prior to 2005, use the treatment coding guidelines as stated in "The Red Book."

For cases diagnosed 1/1/05 and beyond, if you wish, you can still use the treatment guidelines as stated in the book only after verifying the treatment in SEER*Rx. If the treatment is the same, code it. If the treatment is different, code it per SEER*Rx.

Double-Coding Palliative Rx

For cases diagnosed in 2003 forward, you need to double-code palliative treatment and first course of treatment items. This decision to double-code was handed down first from SEER, then from the ACoS in FORDS 2004. Page 191 of FORDS: Revised for 2004 states:

> "Surgical procedures, radiation therapy, or systemic therapy provided to prolong the patient's life by controlling symptoms, to alleviate pain, or to make the patient comfortable at this facility should be coded as palliative care *and as first course therapy if that procedure removes or modifies either primary or secondary malignant tissue*." (Italics: ACR).

This is in direct contrast to ACR sticker 217b in the original FORDS manual, also on page 191. A new sticker to replace sticker 217b will be issued by the ACR.

REMEMBER: Palliative treatment is to be coded only if it is first course of therapy. It is not necessary to collect information on second course of therapy, regardless if it is palliative or not.

CODING CORNER

Collaborative Stage Q & A

The following questions and answers were taken from the Frequently Asked Questions section of the Collaborative Staging section of the AJCC web site. The complete FAQ's can be accessed from http://www.cancerstaging.org/cstage/manuals.html.

Prostate

Q: A clinical prostate cancer patient had an unknown clinical apex status. TURP was the only treatment, no prostatectomy performed. What is the code for SSF4 since we cannot use 999?
A: Code Site-specific Factor 4 (Prostate Apex Involvement) to 550 "Clinical apex involvement: Unknown and Prostatectomy apex involvement: Unknown. "Prostatectomy apex involvement: Unknown" can be used for cases in which no prostatectomy was performed. (8/05)

Q: If a patient was clinically T2c with positive biopsy in the apex and had a prostatectomy that involved right and left lobes and focally the apex, what should be coded for CS SS4?
A: Code Site-specific Factor 4 (Prostate Apex Involvement) to 220 which can be used when the apex is involved both clinically and at prostatectomy but it is unknown if this is arising in or extending to the apex. (8/05)

Q: Site-specific Factor 4 (Prostate Apex Involvement), how is clinically apparent apex involvement with no prostatectomy coded?
A: The new definitions for Site-specific Factor 4 (Prostate Apex Involvement) have been written to allow for both clinical findings as well as findings at prostatectomy. If the tumor is arising in the apex, use code 350. If it cannot be determined if this apical involvement is arising in, or extending to, the apex, use 250. (8/05)

Q: If a patient had a cryoprostatectomy as part of first course treatment with no path report, FORDS Surgery Code 14, how is Site-Specific Factor 3 (Pathologic Extension) coded?
A: Site-Specific Factor 3 CS Extension – Pathologic is coded 097, "no prostatectomy done". The FORDS Surgery Code would be 13, with no pathology specimen. (8/05)

Primary Unknown to Known

Q: An institution clinically diagnoses a patient with carcinomatosis and the registry enters the case as an unknown primary (C80.9), carcinoma, NOS, stage of disease unknown. Then nine months later, a paracentesis shows serous cystadenocarcinoma. The physician now says that the patient has an ovarian primary. According to SEER and FORDS, it's OK to go back and change the primary site, but can the CS be re-coded based on the new information?
A: Yes, primary site, laterality, histology, and stage can be revised when information becomes more complete. Keep in mind, however, that if staging information is updated, it is important to adhere to the timing requirements for the respective staging systems. Most cases that require revision were unknown primaries. (8/05)

CS Reliability

Q: Are there any quality assurance processes that are recommended when implementing CS?
A: This will be addressed post-implementation by the CS Task Force. (April, 2004)
August, 2005 Update: A CS Reliability Study will be conducted in the Fall of 2005. The purpose of this study is to provide a statistically valid estimate of consistency with which registrars apply the rules for the collaborative stage (CS) elements and to compare observed accuracy rates with projected accuracy goals to identify quality improvement opportunities in areas such as documentation and training. For more information on the CS Reliability Study, contact Valerie Vesich at *ajcc@facs.org*. (8/05)

COMING SOON

Changes for Class 0 Cases

Beginning in 2006, the CoC will no longer require follow-up or AJCC staging for class of case 0 cases.

This change will not impact coding for the following items:

- Collaborative staging fields
- Surgical Diagnostic and Staging Procedure
- Date of Diagnostic Surgical and Staging Procedure
- Scope of Regional Lymph Node Surgery @ This Facility
- Scope of Regional Lymph Node Surgery
- Date of First Surgical Procedure and Date of First Course Treatment in those cases where diagnostic and staging surgery of regional nodes is performed

The issue has yet to be taken up by ACR, SEER, NAACCR, or NPCR.

New Histology and Multiple Primary Site Rules

The SEER program recently conducted a workshop for the purpose of preliminary training in the overhauled multiple primary site and histology rules. These changes will be effective for cases diagnosed January 1, 2007 forward, and will supersede all previous rules.

The Quality Improvement staff at SEER identified numerous inaccuracies and inconsistencies during the course of audits and reliability studies. The large number of questions concerning these issues submitted to CoC's and SEER's inquiry systems was another red flag to standard setters. Coding complex or mixed histologies proved to be especially problematic. Also, the current rules for determining multiple primaries have a number of site-specific exceptions. NAACCR found that there was much variation among central registries in the use of rules governing the determination of multiple primaries.

SEER and other standard-setters worked extensively to identify solutions to make coding more accurate and consistent. Another goal was to minimize the impact that the changes would have on incidence counts.

The revised multiple primaries rules will be divided up into three separate "modules" to determine whether one needs to abstract a case as an unknown number of tumors, a single tumor, or multiple tumors. Similarly, guidelines for coding histology will be provided for single and multiple tumors.

The rules will be provided in three formats– text, flowchart, and matrix (similar to a table)- so that registrars can choose the one that is the most intuitive to them.

Site-specific rules are being adopted for lung, colon, breast, kidney, renal pelvis, ureter, bladder, head/neck, melanoma, and brain. General rules will be applicable to all other sites, with leukemias and lymphomas exempted.

Field testing and further revisions are on the agenda for next year.

Training opportunities will be made available next year. The ACR will keep the registrar community informed of developments and will offer training as the implementation date approaches.

DATA SECTION

Your Data Hard at Work!

A New Geography for Arizona

By Ali Jackson, M.S.

The Arizona Cancer Registry and the Bureau of Public Health Statistics have developed an additional approach to researching cancer data. This new system was established to facilitate epidemiological analysis of populations at the community level, helping pinpoint populations that may need further investigation. These analyses may be useful to researchers and public health administrators as they determine where to target research and programs for education, prevention and early intervention. Those involved in community public health programs are encouraged to use this information as one tool in identifying where the greatest need exists for their services.

The basis of this new approach, Community Health Analysis Areas (CHAA), is a community-based geographic unit within the state of Arizona. Cancer data is the first to be analyzed by CHAA, but other programs, including Birth Defects Registry, Hospital Discharge, and Vital Statistics will be able to use CHAA's for their analyses as well.

Why CHAA's?

Geography-based analysis often takes place on the county and city levels, or by zip code. However, these methods do not always permit identification of populations that may be in need of further investigation. County-level analysis in Arizona is not practical for community-level examination. Arizona is divided in to 15 sizeable counties, and 60% of the state's population resides in Maricopa County. Similarly, city-level analysis does not allow for the study of communities within large cities where demographics vary. Zip code analysis has its own limitations; changing boundaries hinder time-trend analysis, and P.O Box zip codes lack clear boundaries. Hence, the need was identified for relatively small, community-based geographic units, and CHAA's were the answer!

Establishing Boundaries

Creating the boundaries of CHAA's presented a conundrum: Where should the boundaries be placed that would both match community borders, and also allow for calculation of population denominators? To answer this, ADHS staff Richard Porter (Bureau Chief), Dr. Timothy Flood (Medical Director), and Chris Newton (Cancer Epidemiologist), along with Wes Kortuem (GIS Consultant) looked to Primary Care Areas (PCA) and the 2000 Census Block Groups. PCA's have been used for many years to identify areas where the local residents obtain their health care primarily, and were a useful starting point for CHAA's. Creating the CHAA's required modifying the PCA boundaries to more closely align to established and growing communities. Additional adjustments were needed where PCA's were too small to be useful for statistical analysis, and others were too large to represent a single community. These modifications took into account the population numbers in the 2000 Census Block Groups, which became the basis for the CHAA population denominator. Additional boundary and population guidelines were followed with a few exceptions allowed, providing the best fit for Arizona communities and Indian Reservations. Ultimately, 126 CHAA's were created with an average population of 21,500 and (with a few exceptions) a range of 5,000-190,000.

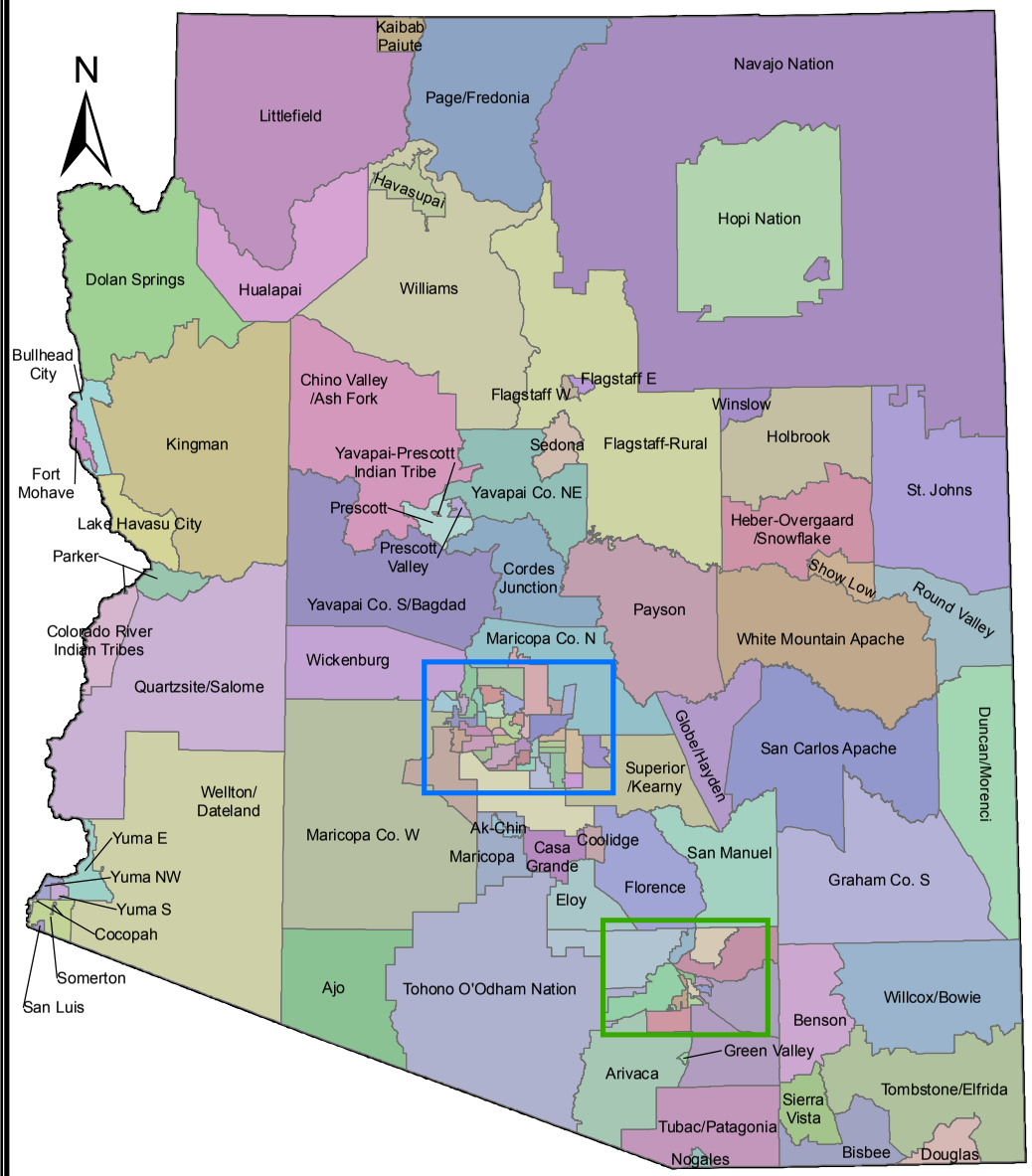
CHAA's Have Their Advantages

Using six years of geocoded data (1995-2000), CHAA's provide reliable statistical insight of the cancer burden among Arizona communities. These data are reported from hospitals, clinics and doctors who are required by law to report cancer cases. Thirteen cancers are selected for analysis by CHAA because of their public health implications, including cancers that are more frequently diagnosed or preventable, or cancers for which screening is available. The frequently diagnosed cancers have rates that are statistically reliable. However, cancers that are diagnosed relatively infrequently produce very small case numbers for some of the CHAA's, thus limiting statistical analysis. Case counts and age-adjusted rates by CHAA are calculated for the following cancers: Bladder, Brain, Cervix, Colo-rectal, Female Breast, Kidney, Renal Pelvis, Leukemia (age 0-14), Lung, Melanoma, Mesothelioma, Multiple Myeloma, Oral, and Prostate.

Confidence intervals are also provided for data interpretation, specifically to determine whether differences in rates are statistically significant. CHAA boundary definition maps, maps of age-adjusted rates and tabulated incidence reports for selected cancers, including data from 1995-2000, can be located online at www.azdhs.gov/phs/azchaa.

A color map of the Arizona's CHAA's is on the facing page.

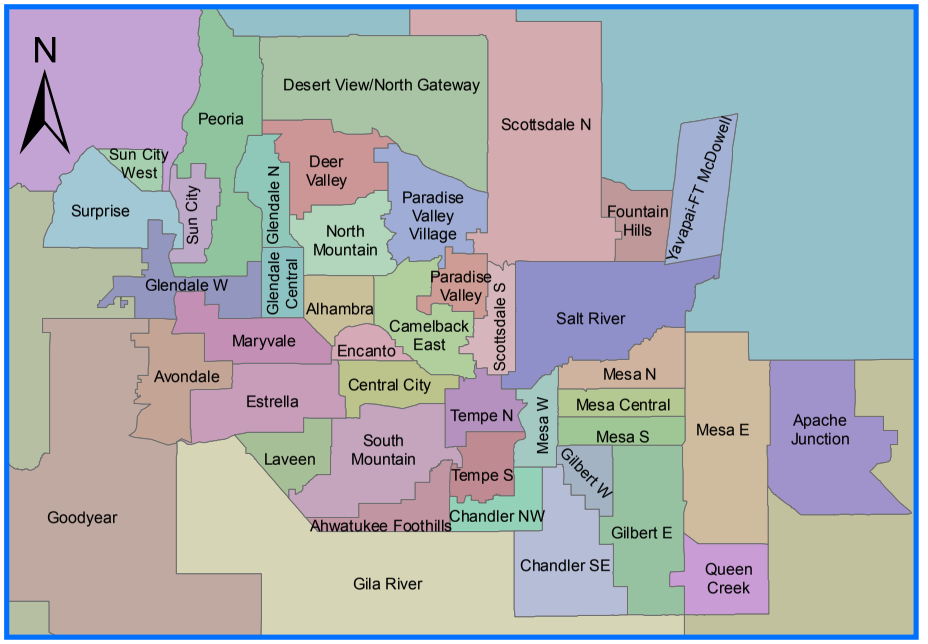
Community Health Analysis Areas



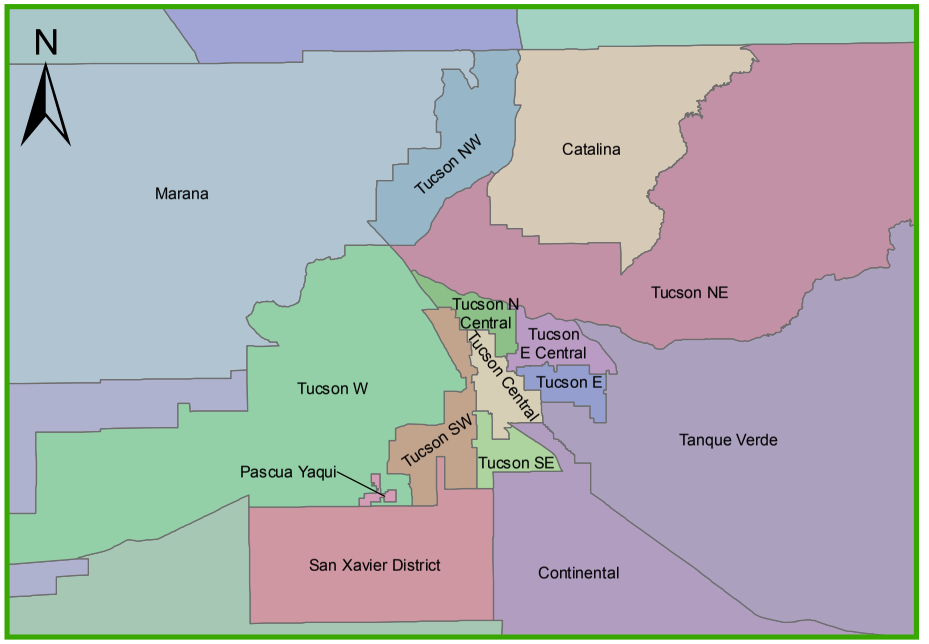
Arizona Department of Health Services

June 2005

Metro Phoenix



Metro Tucson



DATA SECTION

Your Data Hard at Work!

Patient Address: A Simple and Vital Tool for Central Registries

Kara Locketti, CTR

A patient's address is one of the more straightforward items that a registrar collects. Due to its being relatively clear-cut, one might not attach as much importance to it as to data items such as site, histology, and stage which require more training and judgment to interpret properly. From a central registry's perspective, however, address at diagnosis is vitally important. How does the study of geography apply to cancer registries? The first thing you might think of is the concern in communities about cancer, and possible associated environmental carcinogens. In addition to aiding in the identification of geographic areas of concern, address is used as a tool to calculate incidence rates (the number of new cases in a specific population diagnosed over a specific time period) and to help clarify which populations may be in need of screening or prevention services. Some specific examples include:

- The rate of decline in cervical cancer death rates during the 1970's and 1980's was slower in West Virginia than in other regions of the U.S.. This was not obvious to researchers until the data were mapped. These findings prompted the state's Medicaid program to cover Pap smears, and over time cervical cancer mortality in the area declined.
- Researchers at the Nova Scotia Cancer Registry found, using Geographic Information Systems, that patients were less likely to receive palliative radiation therapy the farther they lived from a cancer center.

Geographic Information Systems (GIS) provides a valuable set of tools for central registries in the processing and analysis of address information. GIS is formally defined as "a structural approach to collecting, archiving, analyzing, manipulating, and displaying data…using a combination of personnel, equipment, computer software, and organizational procedures." Addresses are first cleaned up to make sure that they adhere to formatting conventions used by the software. They are then assigned a latitude/longitude, if possible, and a point on a street reference file, a process known as geocoding. NAACCR, SEER, and NPCR require central cancer registries to geocode on the census-tract level. A census-tract is a subdivision of a county containing a relatively homogenous population. Census tracts are used because this level allows reporting needs to be met while preserving patient confidentiality. (A related term you may have encountered, census blocks, refers to a subdivision of a census tract). Once data are cleaned up and geocoded, it is ready for analysis. One important consideration is which geographic unit should be used—Should the data be analyzed by census tract, zip code, county, etc.? (For a more in-depth look at this issue, see Ali Jackson's article on Community Health Analysis Areas on pages 14-15.)

When it comes to diseases like cancer that take a long time to develop, analyzing location data can lead not so much to answers but to questions. Because cancer has a long latency period, and also due to things like people's genetics, behavior and moving around, it is difficult to establish a cause-and-effect relationship. Put another way, just because an elevated number of cases are found in an area, compared to what would be expected given the demographics of the region, it does not necessarily mean that there is something in the environment that is contributing. For instance, the Minnesota Cancer Surveillance System found that it was difficult to pinpoint mesothelioma occurrence in the areas around asbestos plants, because some people who lived in the area were likely not exposed, and, conversely, some who were exposed had moved away.

The job of the hospital registrar is to make sure that street address and county information at the time of diagnosis are entered correctly using the rules and guidelines spelled out in FORDS pages 20, 21 and 42. Conventions regarding street naming and abbreviations originated from the U.S. Postal Service. The information available in the patient's record may or may not be the patient's usual address. Pinning down where a patient lives most of the time can be problematic in a place like Arizona that has a large number of vacationers and winter residents. Address information can be quality-controlled at the facility level using a tool like Perfect Address, which can help you:

- Verify and correct mailing addresses for the entire USA.
- Find the correct ZIP code for any address.
- Find the exact county for any mailing address (more than 20% of all 5-digit ZIP codes cross county lines).
- Find the city-state for any ZIP code

This tool is available for a variable fee, depending on the server, and can help the ACR make sure that the address information we receive is correct in content and format.

The information for this piece was taken from:
North American Association of Central Cancer Registries. *Using Geographic Information Systems Technology in the Collection, Analysis and Presentation of Cancer Registry Data: A Handbook of Basic Practices.* October 2002.

This publication is available online at *http://www.naaccr.org/filesystem/pdf/GIS handbook 6-3-03.pdf*

Definitions for census tract and census block were taken from the glossary at the American FactFinder section of the U.S. Census Bureau's web site (http://factfinder.census.gov/home)

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We're on the web!
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Cancer Registry Review

This document is published by the Arizona Department of Health Services, Bureau of Public Health Statistics, Office of Health Registries, Arizona Cancer Registry. It is intended to provide information and education for those who read it.

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